

Do prebiotics promote health through microbiota-mediated mechanisms?

Michiel Kleerebezem

Wageningen University, the Netherlands

Abstract

Probiotics can (transiently) influence the intestinal microbiota composition. This impact on microbiota composition is especially apparent in the small intestine, which is mainly due to the lower microbial density of this region of the intestinal tract. However, there is only very limited evidence for the impact of probiotic supplements on (transient) modification of the endogenous intestinal tract microbiota composition or activity. This talk will highlight a recent study that indicated that transient colonization efficacy of probiotics in the human small intestine is determined by the composition and activity of the resident microbiota. However, the same study also demonstrated that probiotic supplementation did not significantly affect microbiota composition. Nevertheless, specific metabolic capacities of probiotic strains may have a prominent impact on the metabolic activity of the small intestinal microbiome and thereby impact metabolite profiles in individuals, which could elicit downstream health effects.